

CLAIMS

1 1. Integrated circuit including at least two circuit components (1, 2), which are formed
2 on a semiconductor substrate (13) of the first conductivity type and which each have a self-
3 contained supply voltage system, and including at least one coupling circuit which connects
4 the same potentials (V_{ss1} , V_{ss2} ; V_{cc1} , V_{cc2}) of the two supply voltage systems so as to
5 intercept voltage spikes, characterized in that the coupling circuit includes at least one
6 transistor (T1, T2, T3) with a base (20, 21, 22) of the first conductivity type, and a collector
7 (15, 16, 17, 18) and emitter (15, 16, 17, 18) of a second conductivity type, the base of which
8 is connected through a resistance (R) to the potentials (V_{ss1} , V_{ss2}) of the two supply voltage
9 systems, and the collector and emitter of which are connected directly to one of these
10 potentials.

1 2. The integrated circuit of claim 1, wherein the base (20, 21, 22) of the transistor (T1,
2 T2, T3) is a region of the substrate (13), and that the resistance (R) is the intrinsic resistance
3 of the substrate (13) between the base (20, 21, 22) and a contact doping zone (14, 19)
4 metallurgically connected to the collector or emitter.

1 3. The integrated circuit of claim 2, wherein the collector and emitter of the transistor
2 are symmetrical.

1 4. The integrated circuit of claim 3, wherein the coupling circuit includes a plurality of
2 transistors (T1, T2, T3) connected in parallel between the power supply potentials (Vss1,
3 Vss2).

1 5. The integrated circuit of claim 4, wherein the transistors comprise a plurality of
2 doping zones (15, 16, 17, 18) of the second conductivity type, which doping zones are
3 alternately connected to the first (Vss1) or the second (Vss2) of the two power supply
4 potentials.

1 6. The integrated circuit of claim 5, wherein the doping zones (15, 16, 17, 18) are
2 arranged in an equidistant configuration.

1 7. The integrated circuit of claim 6, wherein the doping zones (15, 16, 17, 18) of the
2 second conductivity type are extended transversely relative to the series.

1 8. The integrated circuit of claim 7, wherein the contact doping zones (14, 19) are
2 located at the ends of the series.

1 9. The integrated circuit of claim 8, wherein each contact doping zone (14, 19) in the
2 series is adjacent to a doping zone (15, 18) of the second conductivity type which is
3 metallically connected to the zone.

1 10. The integrated circuit of claim 9, wherein the number of doping zones (15, 16, 17, 18)
2 of the second conductivity type is an even number.

1 11. The integrated circuit of claim 10, wherein the circuit has four doping zones (15, 16,
2 17, 18) of the second conductivity type.

1 12. The integrated circuit of claim 11, wherein the at least one transistor is surrounded by
2 a shielding doping zone (23) of the second conductivity type.

1 13. The integrated circuit of claim 12, wherein the shielding doping zone (23) is biased in
2 the nonconducting direction.

1 14. The integrated circuit of claim 12, the shielding doping zone (23) extends in an
2 annular configuration along the surface of the substrate (13).

1 15. The integrated circuit of claim 14, wherein a highly doped contact zone (25) is
2 formed in the shielding doping zone (23).

1 16. The integrated circuit of claim 15, wherein the contact zone (25) includes two islands,
2 each of which is conductively connected to one of the potentials (V_{ss1} , V_{ss2}) of the two
3 supply voltage systems.

- 1 17. The integrated circuit of claim 15, wherein the contact doping zones (14, 19) are
- 2 formed on the shielding doping zone (23).